

SARS-CoV-2 Spike S1 protein

Receptor binding domain (RBD)

Cat. no. P2020-021

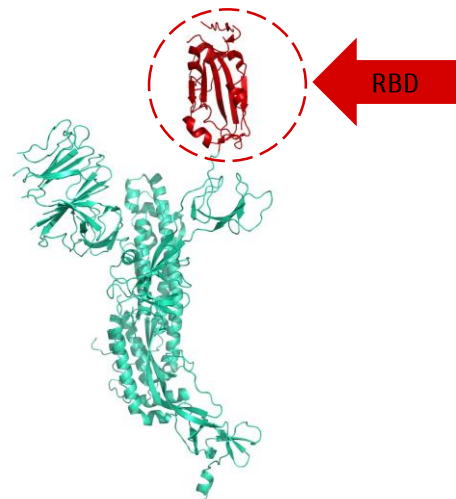
Product Information

Protein:	SARS-CoV-2-S1(RBD)-His (~ 27.5 kDa)
Sequence:	MRVQPTESIVRFPNITNLCPFGEVFNATRFASVYAWNRRKRISNCVADYSVLYNSASFSTFKCYGVSPTKLNLDLCTFNYYADSFVIRGDEVQRQIAPGQTGKIADYNYKLPDDFTGCVIAWN SNNLDSKVGGNYYLYRFLFRKSNLKPFRDISTEIYQAGSTPCNGVEGFNCYFPLQSYGF QPTNGVGYQPYRVVVLSEFELLHAPATVCGPKKSTNLVKNKCVNF
	Methionine at pos. 1 present due to cloning constraints, C-terminal His-tag not shown in sequence.
Source:	Recombinantly expressed in HEK293 cells.
Tag(s):	His-tag, C-terminal
Purification:	Purified by affinity chromatography and subsequent buffer exchange.
Formulation:	PBS; pH 7.4
	Lyophilized, stored at -80 °C and shipped at ambient temperature. We recommend to reconstitute the sample in H ₂ O (WFI) to the initial concentration.
Purity:	> 85 % (will be determined by densitometry of Coomassie stained gel)
Concentration:	Will be determined by BCA-Assay.
Long-term storage:	No recommendations.
Comment:	Protein migrates at higher molecular weight during SDS-PAGE due to posttranslational modifications. If maximum activity is needed, we recommend to order our protein as liquid formulation (P2020-001).

Background Information:

The spike (S) glycoprotein of coronaviruses is essential for binding of the virus to the host cell at the beginning of the infection process. The severe acute respiratory syndrome-coronavirus (SARS-CoV) spike (S) glycoprotein is responsible for membrane fusion and is therefore required for virus entry and cell fusion. The target protein is also a major immunogen and a possible target for entry inhibitors.

The SARS-CoV-2 spike (S) protein is a large type I transmembrane protein composed of two subunits, S1 and S2. The S1 subunit contains a receptor-binding domain (RBD) responsible for binding to the host cell receptor angiotensin-converting enzyme 2 (ACE2). The S2 subunit mediates fusion between the viral and host cell membranes. The S1 RBD protein plays key parts in the induction of neutralizing-antibody and T-cell responses, as well as protective immunity.



Structural model of the spike protein of SARS-CoV-2 (monomer) with its receptor binding domain (RBD) highlighted (red).